



Joint Interoperability Test Command

Test Planning Oversight Committee

FORT HUACHUCA, AZ
3-4 Nov 99

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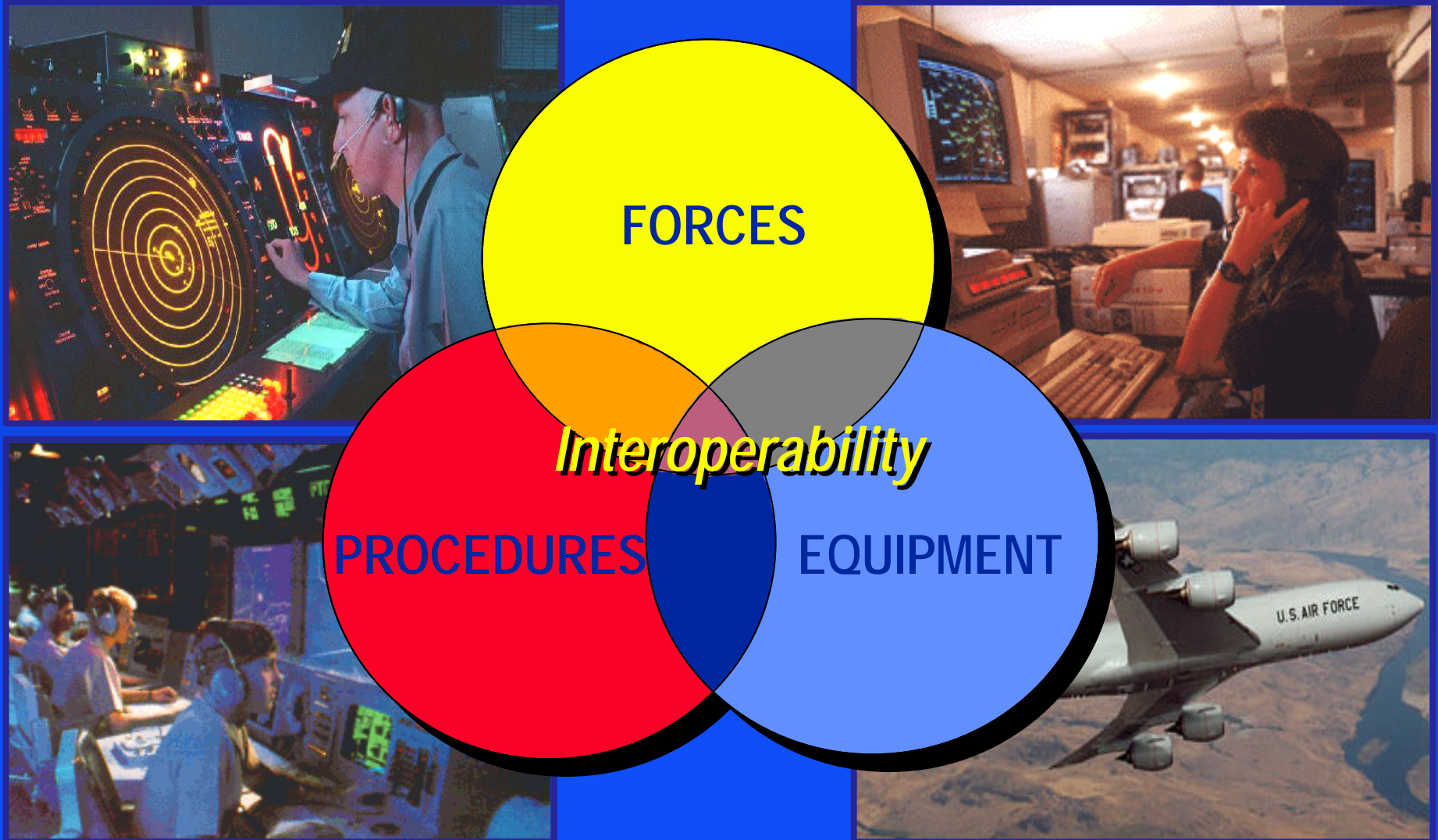


AGENDA

- ☐ **JITC Interoperability Testing**
 - Certification Process
 - Testing Summary
- ☐ **Testing Accomplished**
- ☐ **Interoperability Lessons Learned**
- ☐ **Upcoming Test Schedule**



JITC's Interoperability Perspective





Joint Interoperability Certification Process

Requirements Certification

**Joint Staff,
C/S/As, DISA/JITC**

- ☐ Definition Phase
- ☐ Documentation Phase
- ☐ Validation Phase
- ☐ Approval Phase

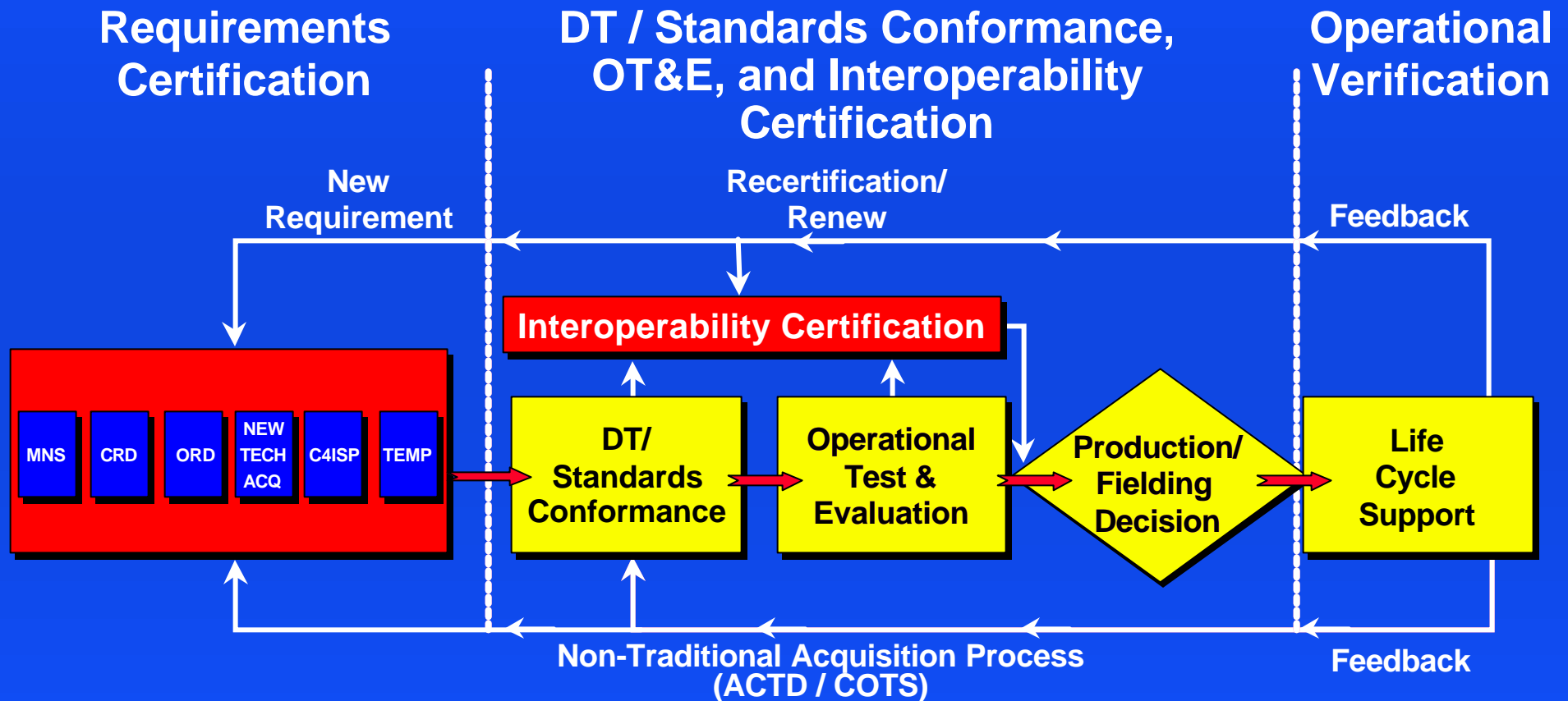
Joint Interoperability Certification

DISA/JITC/Services

- ☐ Standards Conformance Certification
- ☐ Interoperability Certification
- ☐ Life-Cycle Support



System Life-Cycle Certification Process



“Interoperability must be a life-cycle commitment.”

Lieutenant General John L. Woodward, Jr., Director, Command, Control, Communications and Computer Systems Directorate (J-6), Joint Staff



JITC Test Planning Process

- ☐ Review requirements document
- ☐ Identify and confirm User requirements
- ☐ Create requirements matrix
- ☐ Coordinate matrix and rating scale with community



JITC Interoperability Test Conduct Goals

- ☐ Incorporate user input into the test and evaluation process
- ☐ Identify and test all joint interoperability requirements
- ☐ Provide a comprehensive summary of the system's capability to execute required mission
- ☐ Provide a simple but meaningful measure of interoperability



JITC Levels Of Certification

- I-1. ALL joint interoperability requirements are met.**
- I-2. SOME joint interoperability requirements are met.
Deficiencies may have MINOR operational impacts.**
- I-3. SOME joint interoperability requirements are met.
Deficiencies may have a MODERATE operational impact.**
- I-4. SOME joint interoperability requirements are met.
Deficiencies may have a SIGNIFICANT operational impacts.**
- I-5. Joint interoperability requirements are not met or data is not available.**

- * Minor operational impacts have little or no overall consequence to user mission.**
- * Moderate operational impacts may cause delays or degrade performance, but are unlikely to cause mission failures.**
- * Significant operational impacts may lead to critical mission failures.**



JITC Test Reporting Process

- ❑ Certification letter includes ratings for each interface and the overall System
- ❑ Certification summary includes requirements/results matrix
- ❑ Certification report goal: 4 weeks
- ❑ Certification letter goal: report + 2 weeks



JITC DODIIS Test Philosophy & Process

☐ Planning

- Meet both DODIIS and JCS Interoperability Certification Requirements

☐ Conducting

- Beta I (Integration and Compliance) at JITF
- Beta II (Site Acceptance) at a DoDIIS Beta Site

☐ Reporting

- After Beta I - A "Recommend to Proceed to Beta II Letter"
- After Beta II - An Joint Interoperability Certification and Test Report



DODIIS Interoperability Testing Summary To Date

❑ Interoperability Certification Testing

- **Over 50 Interoperability Certification and Evaluation Tests on 34 different IMAs/Versions**

❑ Y2K Interoperability Assessment Testing

- **8 Y2K Interoperability Assessment Test**
- **AF SIMO Enterprise Y2K Assessment of 27 different applications in five different configurations**



Systems Tested

Imagery

IPA 1.2.2

IPL 1.0

IPL 2.0

IPL 2.1

IESS 1.1

IESS 2.0

IESS 3.0

IESS 3.1

IESS 3.2

IESS 4.0

DE 1.0.3

DE 2.0

OPS 1.0

NIMA LIB 1.0

Broadsword 1.0

Broadsword 2.0

TMWS 3.0

Messaging

MAXI

AMHS 2.3.4

CSP 5.4.1

CSP 5.4.2

CSP 5.5

JCMT 0.4

JCMT 1.0

JCMT 1.1



Systems Tested

DB/Production

MIDB 2.0
MIDB 2.0.2

EOBS 1.0
EOBS 1.5

MDITDS 1.0

GALE-Lite 4.3

All-Source

JDISS 2.01.2
JDISS 3.0
JDISS 3.3



Interoperability Lessons Learned

- ❑ National Imagery Transmission Format Standard (NITFS) not implemented correctly in all products
 - Different viewers will view the same file differently
 - Problem: Same image but different target
- ❑ JITC assessment and certification based on operational perspective





Interoperability Lessons Learned

❑ STANDARDS CONFORMANCE

- Imagery Viewers implement NITFS differently (MATRIX and ERDAS)
- Proliferation of Non-standard standards (TFRD)
- Standards adopted unilaterally (USMTF 98 & 99 and AUTODIN (DOI 103) Y2K Methods)



Interoperability Lessons Learned

- ❑ Real-World configurations are different from design configurations or networks
 - JCMT, AMHS, DAWS and sectional message identification and re-assembly from AUTODIN
 - CSP and AMHS via RS 232
- ❑ DODIIS System “Devolution”
 - IPL 1.0 to IPL 2.1 and Broadsword 2.0
 - IDEX II to four separate applications



Interoperability Lessons Learned

- ❑ COTS products may reduce need for functional testing, but increases the need for interoperability testing (e.g. Email, word processing and presentation applications)
- ❑ Develop problem-solving synergy during testing (DMS/CSP and AMHS/JCMT collaboration at the AF Y2K test, and imagery application collaboration at IESS 4.0 test)
- ❑ Review process of recertifying new version of systems without testing



Upcoming DODIIS Interoperability Test Schedule

Nov Dec Jan Feb Mar Apr May



**AMHS 2.3.6
Beta I**

**IESS 4.1
Beta I**

**IPL 2.5
Beta I**

**JTT
Beta I**

JIVA

**IDEX II Replacement
(Demo 14) Beta I, II & Y2K**



IDEX Replacement System (NIMA Demo 14)

Test Dates/Locations:

Beta I, Jan 00, NIMA ITF, Newington, VA

Y2K Interoperability, 17-28 Jan 00, NIMA ITF, Newington, VA

Beta II, Mar 13 - 20, 00, JFIC, Norfolk, VA

Interfaces:

DE V2.1

IAS V2.7

IEC V2.0

NIMA Library V2.0

IPL V2.1

EAC V1.0

IESS Version 4.0

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Imagery Exploitation Support System (IESS) Version 4.1

Test Dates/Locations:

Beta I, 10-14 Jan 00, JITF, Rome, NY

Interfaces:

DE V2.1

MIDB 2.0.2

IPL V2.1

EPS B25

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Joint Targeting Toolset (JTT) 1.0

Test Dates/Locations:

Beta I, Y2K Interoperability - 21-25 Feb 00, JITF, Rome, NY

Beta II - TBD

Interfaces:

MIDB 2.0.2

5D 4.0.4.4

IPL V2.1

WinJMEM

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Automated Message Handling System (AMHS) 2.3.6

Test Dates/Locations:

Beta I, 13-17 March 00, JITF, Rome, NY

Beta II - TBD

Interfaces:

CSP 5.6A

IESS 4.1

DMS

CSP/SMART

JCMT 1.1

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Joint Intelligence Virtual Architecture (JIVA)

Test Dates/Locations:

Beta I, 17-21 April 00, JITF, Rome, NY

Beta II - TBD

Interfaces:

TBD

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Image Product Library (IPL) 2.5

Test Dates/Locations:

Beta 1, 17-21 April 00, JITF, Rome, NY

Interfaces:

Broadsword

DE

IESS

NIMA Library

IRS

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